**Amy E. Kendig** aekendig@gmail.com • amykendig.rbind.io

**Education**

**PhD in Ecology, Evolution, and Behavior** 2011–2017

University of Minnesota, St. Paul, MN

Minor in Risk Analysis for Introduced Species and Genotypes

**BS in Biology** 2007–2011

Georgia Institute of Technology, Atlanta, GA

**Additional Training**

NSF Cyber Carpentry: Data Life-Cycle Training, Chapel Hill, NC July 2019

Enhancing Linkages between Math and Ecology, Kellogg Biological Station, MI June 2013

Ecology and Evolution of Infectious Diseases Workshop, Ann Arbor, MI May 2012

**Professional Experience**

**Postdoctoral Research Associate**

Agronomy Department, University of Florida, Gainesville, FL 2018–present

**PhD Candidate**

Graduate Research Assistant, Minnesota Invasive Terrestrial Plants and Pests Center 2017

Graduate Teaching Assistant, College of Biological Sciences 2014–2017

Graduate Program Fellow, Department of Ecology, Evolution, and Behavior 2016

NSF Graduate Research Fellow 2013–2014

NSF IGERT Fellowin Risk Assessment of Introduced Species and Genotypes 2011–2013

**Undergraduate Researcher**

Department of Biology, Georgia Institute of Technology, Atlanta, GA 2009–2011 NSF REU, St. Olaf College, Northfield, MN 2010

NSF REU, University of California, Santa Barbara, CA 2009

SURE Fellow, Emory University, Atlanta, GA 2008

**Peer-Reviewed Publications**

\*undergraduate mentee

Kazanski, C., J. Cowles, S. Dymond, A. Clark, A. David, J. M. Jungers, **A. E. Kendig**, C. Riggs, J. Trost, and X. Wei. 2021. Water availability modifies productivity response to biodiversity and nitrogen in long-term grassland experiments. *Ecological Applications* Accepted: e2363. <https://doi.org/10.1002/eap.2363>

**Kendig, A. E.**†, V. J. Svahnström†\*, A. Adhikari, P. F. Harmon, and S. L. Flory. Emerging fungal pathogen of an invasive grass: Implications for competition with native plant species. *PLoS ONE* 16(3): e0237894. <https://doi.org/10.1371/journal.pone.0237894> †co-first authors

Phan, Tin, B. Pell, **A. E. Kendig**, E. T. Borer, and Y. Kuang. 2021. Rich dynamics of a simple delay host-pathogen model of cell-to-cell infection for plant virus. *Discrete and Continuous Dynamical Systems-B* 26: 515­539. <https://doi.org/10.3934/dcdsb.2020261>

**Kendig, A. E.,** E. R. Spear, S. C. Daws, S. L. Flory, and E. A. Mordecai. 2021. Native perennial and non-native annual grasses shape pathogen community composition and disease severity in a California grassland. *Journal of Ecology* 109: 900­–912**.** <https://doi.org/10.1111/1365-2745.13515>

**Kendig, A. E.**, E. T. Borer, E. N. Boak\*, T. C. Picard\*, and E. W. Seabloom. 2020. Host nutrition mediates interactions between plant viruses, altering transmission and predicted disease spread. *Ecology* 101: e03155*.* <https://doi.org/10.1002/ecy.3155>

Goss, E. M., **A. E. Kendig**, A. Adhikari, B. Lane, N. Kortessis, R. D. Holt, K. Clay, P. F. Harmon, and S. L. Flory. 2020. Disease in invasive plant populations. *Annual Review of Phytopathology* 58: 15.1–15.2. <https://doi.org/10.1146/annurev-phyto-010820-012757>

Pell, B., **A. E. Kendig**, E. T. Borer, and Y. Kuang. 2019. Modeling nutrient and disease dynamics in a plant-pathogen system. *Mathematical Biosciences and Engineering* 16: 234–264.  [https://doi.org/10.3934/mbe.2019013](http://dx.doi.org/10.3934/mbe.2019013)

**Kendig, A. E.**, E. T. Borer, C. E. Mitchell, A. G. Power, and E. W. Seabloom. 2017. Characteristics and drivers of plant virus community spatial patterns in US west coast grasslands. *Oikos* 126: 1281–1290.  [https://doi.org/10.1111/oik.04178](http://dx.doi.org/10.1111/oik.04178)

Seabloom, E. W., E. T. Borer, K. Gross, **A. E. Kendig**, C. Lacroix, C. E. Mitchell, E. A. Mordecai, and A. G. Power. 2015. The community ecology of pathogens: coinfection, coexistence and community composition. *Ecology Letters* 18: 401–415.  [https://doi.org/10.1111/ele.12418](http://dx.doi.org/10.1111/ele.12418)

MacDougall, A. S., J. R. Bennett, J. Firn, E. W. Seabloom, E. T. Borer, E. M. Lind, J. L. Orrock, W. S. Harpole, Y. Hautier, P. B. Adler, E. Cleland, K. Davies, B. Melbourne, S. M. Prober, J. D. Bakker, P. A. Fay, V. L. Jin, **A. Kendig**, K. J. La Pierre, J. Moore, J. Morgan, and C. J. Stevens. 2014. Anthropogenic-based regional-scale factors most consistently explain plot-level exotic diversity in grasslands. *Global Ecology and Biogeography* 23: 802–810. <https://doi.org/10.1111/geb.12157>

**Peer-Reviewed Book Chapter**

**Kendig, A. E.**, S. L. Flory, E. M. Goss, R. D. Holt, K. Clay, P. F. Harmon, B. R. Lane, A. Adhikari, and C. M. Wojan. The Role of Pathogens in Plant Invasions. 2020. Anna Traveset and David M. Richardson, editors. Plant Invasions: The Role of Biotic Interactions. CAB International Press. Wallingford, UK.

**Manuscripts in Review**

Benitez, L.\*, **A. E. Kendig**, A. Adhikari, K. Clay, R. D. Holt, E. Goss, S. Luke Flory. Invasive grass litter suppresses native plant establishment and promotes disease. <https://doi.org/10.1101/2021.04.07.437244>

Easterday, C.\*, **A. E. Kendig**, C. Lacroix, E. W. Seabloom, and E. T. Borer. Soil microbes mediate the effects of nitrogen supply and co-inoculation on Barley Yellow Dwarf Virus in *Avena sativa*. <https://doi.org/10.1101/2021.04.28.441777>

**Datasets**

**Kendig, A. E.**, V. J. Svahnström, A. Adhikari, P. F. Harmon, and S. L. Flory. 2021.Emerging fungal pathogen of an invasive grass: Implications for competition with native plant species (Version v1.0). Environmental Data Initiative. <https://doi.org/10.6073/pasta/c85303b29d66e7deb3387215a07015be>

**Kendig, A. E.**, E. R. Spear, S. C. Daws, S. L. Flory, & E. A. Mordecai. 2020. Dataset from: Native perennial and non-native annual grasses shape pathogen community composition and disease severity in a California grassland (Version v1.0). Journal of Ecology. Zenodo. <http://doi.org/10.5281/zenodo.4062434>

**Kendig, A. E.**, E. T. Borer, E. N. Boak, T. C. Picard, and E. W. Seabloom. 2020. Soil nitrogen and phosphorus effects on plant virus density, transmission, and species interactions (Version v2.0). Environmental Data Initiative. https://doi.org/10.6073/pasta/00a35cbd4a9b2a007433c3d2be0d1742

**Grants and Awards**

Army Corps of Engineers: Using Long-Term Datasets to Understand Impacts of Aquatic Plant 2020

Management in Florida; Co-PI ($348,416)

Travel Award, NSF Cyber Carpentry Workshop: Data Life-Cycle Training ($682) 2019

Thompson Earth Systems Institute Outreach Grant ($665) 2018

Travel Award, Dept. of EEB, UMN (3 awards, $2,068) 2013–2018

Alexander and Lydia Anderson Research Grant, UMN ($3,000) 2015

Research Award, Dept. of EEB, UMN (2 awards, $3,944) 2014–2015

National Science Foundation Graduate Research Fellowship Program ($30,000) 2013–2014

Research and Stipend Award, HHMI Research Mentor Program, UMN ($3,000) 2014

Research Award, ISG-IGERT Program, UMN ($2,000) 2013

Travel Award, Enhancing Linkages between Math and Ecology (travel, room, and board) 2013

Travel Award, Ecology and Evolution of Infectious Diseases Workshop ($526) 2012

National Science Foundation Integrative Graduate Education and Research Traineeship

(IGERT) in Risk Assessment of Introduced Species and Genotypes (ISG) ($60,000) 2011–2013

Georgia HOPE Scholarship (full undergraduate tuition) 2007–2011

William-Walls Life Science Award ($500) 2011

Travel Award, ACC Meeting of the Minds (travel, room, and board) 2011

President’s Undergraduate Research Award ($1000) 2010

Ryder Roundtable Scholarship ($10,000) 2007

**Invited Presentations**

Guest Lecture, Invasion Ecology, Auburn University, virtual 2021

Panelist, Community Coding Groups, ResBaz (Research Bazaar), Gainesville, FL 2019

Guest Lecture, Biological Invaders, University of Florida, Gainesville, FL 2018

Seminar, Department of Plant Pathology, University of Minnesota, St. Paul, MN 2018

Seminar, INRA Plant Pathology Unit, Avignon, France 2017

Brown Bag Seminar, Kellogg Biological Station, Michigan State University, Hickory Corners, MI 2017

Interview, University of Florida, Gainesville, FL 2017

Interview, Stanford University, Stanford, CA 2017

Five Minute Thesis Presentation, UMN SIAM Minneapolis, MN 2016

**Co-Organized Symposia**

*Invasive Species and Infectious Diseases: Interactive Effects in Ecological Communities*. 2020

Symposium, Ecological Society of America (ESA) Annual Meeting: virtual.

*When a Raindrop is a Tsunami: Impacts of Disturbance on Plant-Associated Microbial Communities*.2018

Organized Oral Session, ESA Annual Meeting: New Orleans, LA.

*The Introduction of Microbes: For Better or for Worse*. 2013

University of Minnesota ISG-IGERT Annual Symposium: St. Paul, MN

**Contributed Presentations**

*Generalist fungal pathogens may increase the impacts of an invasive understory grass on native grasses.* 2020

ESA Annual Meeting: virtual (talk)

*Effects of pathogen accumulation on native-invasive plant interactions.*  2019

ESA Annual Meeting: Louisville, KY (talk)

*Pathogen accumulation on an invasive species: Implications for native-invasive interactions*. 2019

Florida Exotic Pest Plant Council Annual Symposium: Daytona Beach Shores, FL (poster)

*Pathogen accumulation on an invasive species: Implications for native-invasive interactions*. 2019

Emerging Pathogens Institute Research Day:Gainesville, FL (poster)

*EDDMapS Plant Damage: Using citizen science to understand drivers of invasive plant disease* 2018

*and herbivory.* North American Invasive Species Management Association/Upper Midwest

Invasive Species Joint Conference: Rochester, MN (talk)

*Native and invasive grasses share foliar fungal pathogens*. 2018

ESA Annual Meeting: New Orleans, LA (talk)

*Plant size-virus richness relationships depend on host species and nitrogen inputs.*  2018

Population Biology of Vector-borne Diseases Symposium: Athens, GA (poster)

*Soil nutrients and within-host niche differentiation mediate plant virus interactions*. 2017

Jacques Monod Conference: Roscoff, France (talk)

*Nutrient mediation of within-host and among-host plant virus dynamics*. 2016

ESA Annual Meeting: Ft. Lauderdale, FL (talk)

*The power of analogy: Unifying principles of infectious disease*. 2015

5th International Conference on Infectious Disease Dynamics: Clearwater Beach, FL (poster)

*Using spatial patterns to infer disease processes in a multi-host, multi-pathogen system*. 2013

ESA Annual Meeting: Minneapolis, MN (talk)

*Productivity and soil characteristics as indices of tallgrass prairie success*. 2011

ESA Annual Meeting: Austin, TX (poster)

*Characterization of the chemical defenses of* Sagittaria graminea*, a freshwater plant, against* 2011

*crayfish herbivory*. ACC Meeting of the Minds: Miami, FL (poster)

*The impact of paternal involvement on patterns of brain activity to male and female speech*. 2008

Georgia State University Psychology Undergraduate Research Conference: Atlanta, GA (poster)

**Teaching and Mentoring**

Instructor, Data Carpentry, The Carpentries 2020–present

Teaching Assistant, Toward Conquest of Disease, University of Minnesota (2 semesters) 2016–2017

Teaching Assistant, Ecology, University of Minnesota (2 semesters) 2015–2016

Teaching Assistant, Foundations of Biology II, University of Minnesota (1 semester) 2014

Teaching Assistant, Honors Biological Principles, Georgia Tech (1 semester) 2010

Teaching Assistant, Freshman Seminar, Georgia Tech (1 semester) 2009

University of Florida undergraduate mentees 2018–2020

Liliana Benitez (NSF REU, New College of Florida), Zobia Chanda, Trevor Green, Mariam Higginbotham,

Zadok Jollie, Daniela Menendez, David Notman, Teresa Orosa, Shannon Regan, Penny Reif, Callie San

Antonio, Vida Svahnström (NSF REU, Univsersity of St. Andrews), Ryan Truesdell

University of Minnesota undergraduate mentees 2013–2017

Emily Boak (directed research), Ryan Campbell, Nicholas Cupery (honors thesis), Casey Easterday (NSF

REU), Jessica Lettelleir, Timothy Martin, Tashina Picard (HHMI Transfer Student Program, UROP Program),

Kurra Renner, Luc Robichaud, Alexis Rogers

**Science Outreach and Education**

Organizer, *EDDMapS Disease Detectives* 2018–present

Collect citizen science data on invasive plant infectious diseases with EDDMapS.org.

Speaker, *UF CPET Climate Change Resiliency Program* 2020

Taught a virtual lesson on invasive species and infectious disease to high school students.

Organizer, *Coding in the Environmental Sciences Workshops* 2017–2019

K-12 students to learn about environmental science research and basic coding.

Volunteer, *Collaborative Curriculum Design for Invasive Species Education* 2019

Helped Florida K-12 teachers design lesson plans that incorporate authentic science.

Volunteer, *Girls Who Code* 2016–2017

Mentored K-12 students learning how to code and build a smartphone app.

Curriculum Developer and Teacher, *Market Science* 2015–2017

Science demonstrations at local farmer’s markets and events.

Guest Teacher, *Heritage Middle School* and *Southside Family Charter School* 2011–2017

Taught lessons on plant disease, population growth, and DNA extraction.

Science Fair Judge (5x) 2012–2016

Curriculum Developer and Teacher, *Cedar Creek Ecosystem Science Reserve* 2015

Single day field research experience about plant diversity for middle school students.

**Service and Leadership**

Manuscript reviewer: *The American Naturalist, Biological Invasions, Ecology and Evolution, Ecology Letters, Fungal Ecology, Journal of Animal Ecology, Journal of Applied Ecology*, *Journal of Ecology*, *Journal of Environmental Management*, *Land Degradation and Development, New Phytologist, Plant Ecology, Proceedings of the Royal Society B*

Co-Organizer, R-Ladies Gainesville2019**–**present

*Sessions led: book club discussion, Introduction to R, Docker and RStudio, Tidy Tuesday*

Invasion Ecology Student Presentation Award Judge, Ecological Society of America 2018

Undergraduate Research Opportunities Program Committee, UMN 2016

Friday Noon Seminar Planning Committee, UMN Department of EEB2013–2014, 2016

Sexual Harassment Complaint Liaison, UMN Department of EEB 2015–2016

Volunteer Coordinator, UMN TeachingSMART 2012–2014

Graduate Student President Committee, UMN Department of EEB 2012–2013

Travel Grant Committee, UMN Department of EEB 2012

Council of Graduate Students Representative, UMN Department of EEB 2011–2012

Executive Committee Student Representative, UMN IGERT 2011–2012